

Remarks

The Office Action dated April 12, 2000 has been noted, and its contents carefully studied. In light of the newly-added claims, and the arguments submitted herewith, reconsideration of the rejection under 35 U.S.C. 102 and/or 103 is courteously requested.

With respect to the noted informalities in the application, and in particular to those noted informalities related to the drawings, Applicants note that the Official Draftsman's review report is dated March 22, 1999. Thus, it is clear that the Official Draftsman merely reviewed the informal drawings filed with the original application. Since that time, on January 19, 2000, formal drawings in the form of twelve (12) pages were filed in the above-identified patent application. Thus, it is apparent that the Official Draftsman has not reviewed the newly-filed formal drawings. Accordingly, it is requested that an indication of review and acceptability of the newly-filed formal drawings be provided in due course.

Turning now to the invention, in its broadest aspect, particularly as now recited in the newly-added Claims, in one aspect there is provided an apparatus for bidirectionally transmitting and receiving RF modulated signals on a plurality of interconnected coaxial cables. The apparatus includes a multi-drop signal distribution apparatus having a source input for receiving RF modulated signals from a broadcast source, and a plurality of signal ports, each port adapted for receiving a plurality of modulated signals, including at least the RF modulated signals, and for receiving digital signals from associated ones through a plurality of coaxial cables connectable to each of the signal ports. In a more specific aspect, the apparatus also includes first circuit elements coupling RF broadcast modulated signals to be received at the source input to each one of the plurality of signal ports, and second circuit elements coupling RF modulated signals at each signal port, and any digital signals to be received at each signal port to each other signal port of the plurality of signal ports. Thus, such a distribution unit as structured allows bidirectional transmission and reception of RF

modulated signals on a plurality of interconnected coaxial cables. Other features thereof are more readily evident from dependent Claims 63-66 which are newly added, and need not be discussed in greater detail herein.

In another aspect, there is also provided an interface apparatus connectable to networked appliances distributed in selected locations and connected to a source of RF modulated signals through associated ones of a plurality of single conductor coaxial cables. The interface apparatus includes an RF modulator for transmitting the RF modulated signals and for generating an RF television channel on one of plural reserve spectrum channels from base band audio and video signals receivable from an appliance to be associated therewith. A processing circuit is connected to the RF modulator for programming the modulator by sending bytes for initializing a picture carrier frequency, a sound subcarrier frequency and a video modulation depth. An impedance matching network is connected between I/O ports of the interface apparatus which are connectable to an appliance and a processing circuit, for providing an impedance value to signals at a connection to an appliance which approximates the characteristic impedance provided by coaxial cable.

Other features of the interface apparatus are further detailed in new dependent Claims 68-70.

The originally-presented method and system Claims define a comprehensive system and method of operation in which these two broadly discussed aspects of the invention are deployed. These claims have also been amended, particularly independent Claims 25, 37, 38 and 49, to reflect the bi-directional nature of the system. Independent Claims 1, 12, 13 and 24 reflect in system and method aspects the specific assemblage of components, and steps to achieve implementation of the invention as alternatively recited in the aforementioned Claims. The specific steps and assemblage of components of Claims 1, 12, 13 and 24 are clearly not taught or suggested by the cited references.

Having thus generally discussed the invention, it is respectfully urged that the invention as defined now in the Claims is clearly not anticipated under 35 U.S.C. 102, nor obvious under 35 U.S.C. 103 from the cited references, as will become more clearly evident from the following detailed discussion of the references, which is presented herein for the Examiner's kind consideration.

U.S. Patent No. 5,760,822 to *Couhtino*

U.S.P. 5,760,822 to Couhtino (hereinafter "Couhtino") teaches a system and method in which a central node device is used to transmit cable signals downstream while receiving signals from video devices such as VCRs upstream after they have been frequency shifted to not interfere with the cable signals being sent downstream, i.e., so long as it is frequency shifted to be out of the cable band. Once such signals are received at the node, conventionally known as a "head end unit," they are down-converted and retransmitted downstream along with the cable signals for receipt by receiving devices such as television sets.

In contrast, Applicant's invention in its broadest aspect, for example, as set forth in Claim 61, is an apparatus for bidirectionally transmitting and receiving RF modulated signals without frequency shifting on a plurality of interconnected coaxial cables by allowing port-to-port coupling such that RF modulated signals can be transmitted bidirectionally without the requisite combination of complex devices and systems provided by Couhtino which requires frequency shifting, because otherwise there would be significant interference with the cable signals.

More specifically, it is noted that Couhtino in its Abstract calls for a modulator which shifts the signal generated by the transmitting device to a frequency not receivable by the receiving device. This frequency shift is necessary to avoid interruption or interference with the available received cable channel signals (Column 2, lines 35-37). Thus, while like

Couhtino, Applicant's system does provide a method and apparatus for converting a single coaxial cable system of the type present in many existing residences to a simulated dual-coaxial cable system accommodating interaction between a plurality of terminal devices variously connected thereto, Applicants' invention does so in a much simpler manner which is not disclosed or made obvious by the teachings of Couhtino.

In this regard, to allow the Examiner to further contrast and appreciate the distinctions between Couhtino and the device of Applicant's Claims, the Examiner's attention is invited to Fig. 2 of the application, which discloses a specific embodiment of the apparatus for bidirectionally transmitting and receiving RF modulated signals on a plurality of interconnected coaxial cables. As may be appreciated, when connected to the transmission line, each port is impedance matched to the transmission line and the other ports. Impedance matching from port to port allows coupling to allow bidirectional transmission of the modulated RF signals such that the signals can be received and viewed at any receiving device connected to the coaxial cables without requiring shifting and blocking which is provided a node device or "head end" as is conventionally known in the industry, of Couhtino. Thus, the expensive block converter node/head end device of Couhtino is avoided through a device such as that of Applicant's Claim 61 whose features are also found in the other independent Claims of the application.

These features are also reflected by amendment of original independent Claims 25, 37, 38 and 49, and are implemented as alternative recitation in the specific assemblage of components and the steps of Claims 1, 12, 13 and 24.

In another aspect, Applicants' invention also discloses an interface apparatus connectable to network appliances distributed in selected locations and connected to a source of RF modulated signals through associated ones of a plurality of single conductor coaxial cables. The details of the interface apparatus have been previously discussed in the broad

discussion of the invention herein. There is no remotely analogous device taught by Couhtino, and for these reasons, it is respectfully urged that the invention in its broadest aspects is not anticipated or made obvious by Couhtino's standing alone, or in combination with other cited references discussed hereinafter.

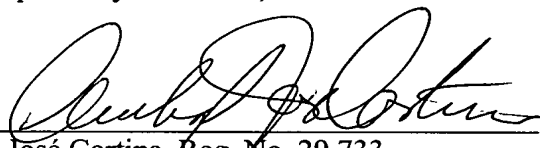
U.S. Patent No. 5,485,630 to Lee, et al

U.S.P. 5,485,630 to Lee, et al (hereinafter "Lee"), merely discloses a conventional signal distribution subsystem adapted for use in a coaxial bus network. Such systems are generally known as CEBus systems which require two coaxial cables, one for upstream transmissions and one for downstream transmissions. Such systems recognize that under conventional technologies, it is not possible to do bidirectional data transmission and thus, the two-cable system is provided to address this problem. The section of the patent referred to by the Examiner discusses some transmission problems in the uplink cable system, and has nothing to do with a single-cable system whereby signals can be transmitted upstream and downstream as a result of connection through a device such as that of Applicants' claimed invention. Thus, Lee adds nothing to the teachings of Couhtino, and the invention and all its aspects as recited in all the claims are not taught or suggested by Lee alone or in combination with the previously-discussed Couhtino patent.

For the foregoing reasons, it is respectfully urged that all of the Claims define patentable subject matter under 35 U.S.C. 102 and/or 103. Nonetheless, should the Examiner have any comments, questions or suggestions of a nature necessary to expedite prosecution of the Application, or to place the case in condition for allowance, he is courteously requested to telephone the undersigned at the number listed below.

Respectfully submitted,

By: _____


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CERTIFICATE OF MAILING UNDER 37 CFR 1.8

I hereby certify that this Amendment and any documents referred to as attached therein are being deposited with the United States Postal Service on this date, August 11, 2000, as First Class Mail in an envelope addressed to Assistant Commissioner for Patents and Trademarks, Washington, D.C. 20231.



Karyn Grimm, Assistant
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